



AMENDMENTS

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In the Specification:

Please amend the specification as follows:

Please delete the title on page 1, lines 1-2 and replace with the following title:

MUSICAL TONE GENERATION APPARATUS INSTALLING EXTENSION BOARD
FOR EXPANSION OF TONE COLORS AND EFFECTS

Please delete the paragraph beginning on page 1, lines 6-9, and replace with the following paragraph:

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This invention relates to musical tone generation apparatuses that generate musical tones in response to desired tone colors. This invention also relates to extension boards which are installed in the musical tone generation apparatuses for expansion of tones colors and effects.

Please delete the paragraph beginning on page 1, lines 16-21, and replace with the following paragraph:

a²
Similar to the computer systems, musical tone generation apparatuses such as sound source devices (or tone generators) and electronic musical instruments install tone color extension boards to enable generation of musical tones using extended tone colors, which differ from preset tone colors originally stored therein. Or, they install extended effect boards to add new effect functions.

Please delete the paragraph beginning on page 2, line 22, and continuing to page 3, line 16, and replace with the following paragraph:

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A musical tone generation apparatus of this invention is basically configured by a main sound source device installing an extension board. Herein, the main sound source device is

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configured by a CPU, memories, operators, a music synthesizer, a mixer, an effector and a sound system, while the extension board is configured by fabricating a CPU (or sequencer), memories and a music synthesizer (or effector). When the extension board is installed in the main sound source device, function setting data regarding new functions installed on the extension board is automatically transferred to the main sound source device so that a user is capable of adequately setting and controlling the new functions by using the operators. If the extension board corresponds to a tone color extension board that provides extended tone colors which differ from preset tone colors installed in the main sound source device in advance, the main sound source device is capable of generating musical tones using the extended tone colors. In that case, it is possible for the sequencer to enable reproduction of a specific sound pattern such as an arpeggio and a phrase to be suited to the extended tone color(s). If the extension board corresponds to an extended effect board that provides extended effects such as harmony, reverb, chorus and echo, the main sound source device is capable of adequately imparting them to musical tones or other sounds.

Please delete the paragraph beginning on page 5, line 10, and continuing to page 6, line 1, and replace with the following paragraph:

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In addition, the main sound source device 1 is connected with an external MIDI device 2 (herein, "MIDI" is an abbreviation for the known standard of "Musical Instrument Digital Interface"). The external MIDI device 2 represents a sequencer, an electronic musical instrument or a personal computer installing a MIDI keyboard or MIDI sequencer software. The main sound source device 1 generates musical tones in response to MIDI signals given from the external MIDI device 2. The tone color extension board 3 installs a music synthesizer (36) enabling generation of tone colors which are not stored in the main sound source device 1. Incidentally, the tone color extension board 3 installs extended tone colors as well as a special tool or measure (not shown, details will be described later) for actualization of new functions

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which utilize the extended tone colors and which are not stored in the main sound source device 1. As an example of the new functions, the present specification describe a sequencer function that actualizes generation of sound patterns such as arpeggio sounds and melody sounds of phrases.

Please delete the paragraph beginning on page 6, lines 16-25, and replace with the following paragraph:

b
Reference numeral "15" collectively designates manual operable members such as switches, keys and controls (hereinafter, simply referred to as "operators"). Herein, the operators 15 are used to set the tone colors for generation of musical tones as well as tone color parameters in the main sound source device 1. In addition, they are used to set tone color parameters and sound patterns for the tone color extension board 3. Basically, the operators 15 are actualized by "physical switches" or "software switches" that operate in cooperation with a display 17 in accordance with software. A detection circuit (or detection circuits) 16 detects operations of the operators 15.

Please delete the paragraph beginning on page 7, lines 4-19, and replace with the following paragraph:

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A music synthesizer 20 synthesizes and generates musical tone signals over multiple channels. The music synthesizer 20 is able to employ any type of music synthesis methods such as waveform memory method, frequency modulation (FM) method, physical model method, higher harmonic synthesis method, formant synthesis method and analog synthesizer method (e.g., VCO+VCF+VCA, where "VCO" is an abbreviation for "voltage-controlled oscillator" and "VCA" is an abbreviation for "voltage-controlled amplifier"). In addition, the music synthesizer 20 is not necessarily designed as a hardware music synthesizer that is configured using specially designed hardware. So, it is possible to employ a music synthesizer that is configured using a

digital signal processor (i.e., DSP) and its microprogram or a music synthesizer that is configured using a CPU and its software program. In addition, the music synthesizer 20 can be designed to realize multiple tone-generation channels by using a single circuit in a time-division manner, or it can be designed such that a single tone-generation channel is realized by a single circuit.

Please delete the paragraph beginning on page 18, lines 8-23, and replace with the following paragraph:

As described above, the musical tone generation apparatus of the present embodiment is basically designed such that the main sound source device 1 responds to installation of the tone color extension board 3 that stores the function setting data 50 in advance. So, the main sound source device 1 reads the function setting data 50 from the tone color extension board 3 to perform assignment of functions to the prescribed switches of the operators 15. For this reason, the main sound source device 1 is capable of coping with installation of any types of tone color extension boards that install new tone colors and new functions. That is, the main sound source device 1 is capable of performing setting operations with respect to any kinds of new tone colors and new functions installed on the tone color extension boards by using the operators 15. As compared with other apparatuses and devices, the main sound source device 1 is capable of easily performing setting operations with respect to the new functions accompanied with the extended tone colors installed on the tone color extension board 3.

Please delete the paragraph beginning on page 29, lines 1-11, and replace with the following paragraph:

Lastly, the present embodiment describes the musical tone generation apparatus basically in a form of a hardware system installing an extension board. Of course, this invention is not necessarily limited to such hardware structure but is actualized by software processing. For example, substantially all parts of the musical tone generation apparatus can be actualized on a

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personal computer or the like in which they are displayed on a screen so that the user operates them with clicks of a mouse or the like. In that case, programs actualizing the parts of the musical tone generation apparatus are provided by storage medium such as floppy disks, compact disks and the like, or they are provided and downloaded from some computer networks such as Internet.
